

ART 34 AMDT

## AMENDED CLAIMS

[ Received by the International Bureau on 08 April 2004 (08.04.04);  
Original claim 54 amended; remaining claims unchanged (1 page)]

51. A method according to claim 50 wherein the components of the mix are present in the quantities:

Cement	375 kg/m <sup>3</sup>
PUR	250 kg/m <sup>3</sup>
Bulking agent	250 kg/m <sup>3</sup>
Waterproofing agent (Hydrophobe)	0.1-0.3% w/w cement
Flowing agent (Airalon)	0.03-0.06% w/w cement
Water	200 l/m <sup>3</sup>

52. A method according to claim 50 wherein the components of the mix are present in the quantities:

Cement	300 kg/m <sup>3</sup>
PUR	327 kg/m <sup>3</sup>
Waterproofing agent (Hydrophobe)	0.1-0.3% w/w cement
Flowing agent (Airalon)	0.03-0.06% w/w cement
Water	373 l/m <sup>3</sup>

53. A PUR building material obtainable by a method of any of claims 41 to 52.

54. A method of preparing a construction element comprising:

- preparing a mould sized to reflect the intended dimensions of the construction element;
- introducing a PUR building material according to claim 53 into the mould;
- curing the formed construction element; and
- separating the mould and the construction element.

55. A method according to claim 54 wherein preparing the mould comprises laying glass fibre matting in the base of the mould and covering the matting with a layer of cementitious grout.
56. A method according to claim 55 wherein the glass fibre matting is alkaline resistant.
57. A method according to claim 55 or 56 wherein the cementitious grout layer is 1-4 mm thick.
58. A method according to claim 57 wherein the cementitious grout layer is 1.5-2mm thick.
59. A method according to claim 57 or 58 wherein the cementitious grout layer is about 2mm thick.
60. A method according to any of claims 55 to 59 wherein the cementitious grout has a plastic density of about 2180 kg/m<sup>2</sup>.
61. A method according to any of claims 55 to 60 wherein the cementitious grout has a cement content of between 400 and 500 kg/m<sup>3</sup>.
62. A method according to any of claims 55 to 61 wherein the glass fibre matting extends outside the mould.
63. A method according to claim 62 wherein following the pouring of the PUR building material into the mould, the glass fibre matting which extends outside the mould is folded onto the non-mould facing surface of the PUR building material.
64. A method according to claim 54 wherein preparing the mould comprises spraying and rolling a layer of glass reinforced cement (GRC) into the base of the mould.

65. A method according to claim 64 wherein the sprayed and rolled layer of GRC is 1-4mm thick.
66. A method according to claim 65 wherein the sprayed and roller layer of GRC is 1.5-2mm thick.
67. A method according to claim 65 or 66 wherein the sprayed and rolled layer of GRC is about 2mm thick.
68. A method according to any of claims 64 to 67 wherein glass fibre is present in the GRC at about 2% w/w cementitious grout.
69. A method according to any of claims 64 to 68 wherein cementitious grout present in the GRC has a plastic density of about 2180 kg/m<sup>2</sup>.
70. A method according to any of claims 64 to 69 wherein cementitious grout present in the GRC has a cement content of between 400 and 500 kg/m<sup>3</sup>.
71. A method according to any of claims 64 to 70 wherein the GRC is sprayed and rolled onto at least one extended mould piece and left for a period of time sufficient to allow the mix to set to form at least one GRC layer.
72. A method according to claim 71 wherein, following the pouring of the PUR building material into the mould, the or each GRC layer is folded onto the non-mould facing surface of the PUR building material.
73. A method according to any of claims 54 to 72 wherein, after the PUR building material has been poured into the mould, the mould is agitated to ensure uniform distribution within the mould of the PUR building material.

74. A method according to claim 73 wherein the mould is placed on a vibrating table to enable the agitation.
75. A method according to any of claims 54 to 74, further comprising:
  - a) the laying of glass fibre matting over the non-mould facing surface of the poured PUR building material; and
  - b) the addition of a layer of cementitious grout over the top surface of the GRC matting.
76. A method according to claim 75, further comprising the trowel finishing of the cementitious grout layer.
77. A method according to claim 75 or 76 wherein the glass fibre matting is alkaline resistant.
78. A method according to any of claims 75 to 77 wherein the cementitious grout layer is 1-4 mm thick.
79. A method according to claim 78 wherein the cementitious grout layer is 1.5-2mm thick.
80. A method according to claim 78 or 79 wherein the cementitious grout layer is about 2mm thick.
81. A method according to any of claims 75 to 80 wherein the cementitious grout has a plastic density of about 2180 kg/m<sup>3</sup>.
82. A method according to any of claims 75 to 81 wherein the cementitious grout has a cement content of between 400 and 500 kg/m<sup>3</sup>.
83. A method according to any of claims 54 to 74, further comprising the spraying and rolling of a layer of GRC onto the non-mould facing surface of the poured PUR

building material.

84. A method according to claim 83, further comprising the trowel finishing of the GRC layer.
85. A method according to claim 83 or 84 wherein the sprayed and rolled layer of GRC is 1-4mm thick.
86. A method according to claim 85 wherein the sprayed and rolled layer of GRC is 1.5-2mm thick.
87. A method according to claim 85 or 86 wherein the sprayed and rolled layer of GRC is about 2mm thick.
88. A method according to any of claims 83 to 87 wherein glass fibre is present in the GRC at about 2% w/w cementitious grout.
89. A method according to any of claims 83 to 88 wherein cementitious grout present in the GRC has a plastic density of about 2180 kg/m<sup>3</sup>.
90. A method according to any of claims 83 to 89 wherein cementitious grout present in the GRC has a cement content of between 400 and 500 kg/m<sup>3</sup>.
91. A method according to any of claims 54 to 90 wherein the curing is air-curing for between 10 and 24 hours.
92. A method according to claim 91 wherein the curing is air-curing for about 12 hours.
93. A method according to any of claims 54 to 90 wherein the curing is accelerated by curing in a mist chamber for between 6 and 15 hours.

94. A method according to claim 93 wherein the curing is accelerated by curing in a mist chamber for about 8 hours.
95. A construction element for use in construction obtainable by a method of any of claims 54 to 94.
96. A building element comprising at least one construction element according to claim 15 or claim 95.
97. A building element according to claim 96 comprising three construction elements according to claim 15 or claim 95.
98. A building element according to claim 96 or 97 wherein the construction elements are fixed together so as to maintain a void between each construction element.
99. A building element according to claim 98 wherein at least one void is filled with self compacting concrete.
100. A building element according to claim 99 wherein the self compacting concrete is reinforced concrete.
101. A building element according to any of claims 98 to 100 wherein at least one void is filled with air entrained concrete.
102. A building element according to claim 101 wherein the air entrained concrete comprises PUR.